



SEQUENCE LISTING

<110> Mark Marchionni
Michael Jarpe
Ted Ebendal

<120> METHODS FOR TREATING NEUROLOGICAL
INJURIES AND DISORDERS

<130> 47506 (71095)

<140> 09/756,481

<141> 2001-01-08

<150> PCT/US99/15106

<151> 1999-07-02

<150> 60/091,791

<151> 1998-07-06

<160> 4

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 1387

<212> DNA

<213> Mouse

<220>

<221> CDS

<222> (218)...(1288)

<400> 1

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ccaggacacctc	aaagcaccccc	cgacctaagg	tcaccagccc	actggcccca	gacgcagtgg	180
gctccgctga	ctcttttggga	caccccttgg	gaggaaaa	atg ctc cct gtc tgc cat		235
				Met Leu Pro Val Cys His		
			1		5	

cgt ttt tgc	gac cac ctc	ctc ctg	ctc ttg	ctg ccc	tcg acg acc	283
Arg Phe	Cys Asp	His Leu	Leu Leu	Leu Leu	Leu Pro Ser Thr Thr	
10		15		20		

ctg gcc ccc	gct gca tcc	atg ggc ccc	gct gcc	gcc ctg ctc	cag	331
Leu Ala Pro	Ala Pro Ala	Ser Met	Gly Pro	Ala Ala	Leu Leu Gln	
25		30		35		

gtt ctt ggg	ctt ccc	gaa gct	ccc cgg	agc gtc	ccc aca	cac cga	cct	379
Val Leu Gly	Leu Pro Glu	Ala Pro Arg	Ser Val	Pro Thr	His Arg	Pro		

40	45	50	
gtg cct cct gtc atg tgg cgc cta ttc cgt cgc cgt gac ccc cag gag Val Pro Pro Val Met Trp Arg Leu Phe Arg Arg Arg Asp Pro Gln Glu			427
55	60	65	70
gcc aga gtg gga cgc cct ctg cgg cca tgc cac gtg gag gaa cta ggg Ala Arg Val Gly Arg Pro Leu Arg Pro Cys His Val Glu Glu Leu Gly			475
75	80	85	
gtc gcc gga aac att gtg cgc cac atc ccc gac agc ggt ctg tcc tcc Val Ala Gly Asn Ile Val Arg His Ile Pro Asp Ser Gly Leu Ser Ser			523
90	95	100	
agg ccc gca caa ccc gcc agg acc tcg ggg ctg tgc ccc gag tgg aca Arg Pro Ala Gln Pro Ala Arg Thr Ser Gly Leu Cys Pro Glu Trp Thr			571
105	110	115	
gtc gtc ttt gac ctg tcg aat gtg gag ccc aca gag cgc cca aca cgc Val Val Phe Asp Leu Ser Asn Val Glu Pro Thr Glu Arg Pro Thr Arg			619
120	125	130	
gcg cgc tta gag ttg cgg ctg gag gct gag tgt gaa gat aca gga ggg Ala Arg Leu Glu Leu Arg Leu Glu Ala Glu Cys Glu Asp Thr Gly Gly			667
135	140	145	150
tgg gag cta agc gtg gca ctg tgg gcc gac gca gag cat cca ggg cct Trp Glu Leu Ser Val Ala Leu Trp Ala Asp Ala Glu His Pro Gly Pro			715
155	160	165	
gag ctg ctg cgc gtg ccg gcg cca cca ggg gtg ctc ctg cgc gca gac Glu Leu Leu Arg Val Pro Ala Pro Pro Gly Val Leu Leu Arg Ala Asp			763
170	175	180	
cta ctg ggg act gca gta gcc gcc aac gca tca gtg ccc tgt act gtg Leu Leu Gly Thr Ala Val Ala Ala Asn Ala Ser Val Pro Cys Thr Val			811
185	190	195	
cgc ctg cgc ctg tca ctg cac cct ggg gcc act gca gcc tgt ggg cgc Arg Leu Ala Leu Ser Leu His Pro Gly Ala Thr Ala Ala Cys Gly Arg			859
200	205	210	
ctg gct gag gcc tcc ctg ctg gtg acg ctg gac cca cgc ctg tgt Leu Ala Glu Ala Ser Leu Leu Leu Val Thr Leu Asp Pro Arg Leu Cys			907
215	220	225	230
ccc ttg ccg cga ttg cgg cgc cac acg gag ccc agg gta gaa gtt ggt Pro Leu Pro Arg Leu Arg Arg His Thr Glu Pro Arg Val Glu Val Gly			955
235	240	245	
cca gtg ggc act tgt cgt acc cga cgg ttg cat gtg agc ttc cgt gag Pro Val Gly Thr Cys Arg Thr Arg Arg Leu His Val Ser Phe Arg Glu			1003

250	255	260	
gtg ggc tgg cac cgt tgg gtg atc gcg ccg cgt ggc ttc cta gcc aac Val Gly Trp His Arg Trp Val Ile Ala Pro Arg Gly Phe Leu Ala Asn			1051
265	270	275	
ttc tgc cag ggc acg tgc gca cta ccc gaa acg ctg agg gga ccc ggc Phe Cys Gln Gly Thr Cys Ala Leu Pro Glu Thr Leu Arg Gly Pro Gly			1099
280	285	290	
ggg ccg cct gca ctc aac cac gct gtg ctg cgc gcg ctc atg cac gca Gly Pro Pro Ala Leu Asn His Ala Val Leu Arg Ala Leu Met His Ala			1147
295	300	305	310
gct gct ccc acc ccg ggt gca ggc tcg ccc tgc tgc gtg cca gag cgt Ala Ala Pro Thr Pro Gly Ala Gly Ser Pro Cys Cys Val Pro Glu Arg			1195
315	320	325	
cta tca ccc atc tcc gtg ctc ttc gac aat agt gac aac gtg gtc Leu Ser Pro Ile Ser Val Leu Phe Phe Asp Asn Ser Asp Asn Val Val			1243
330	335	340	
ctg cga cac tac gaa gac atg gtg gtg gat gag tgt ggc tgc cgt Leu Arg His Tyr Glu Asp Met Val Val Asp Glu Cys Gly Cys Arg			1288
345	350	355	
tgaccacccg ggacaccctt tcagggaccc cccccacgcaa aaggcaggac tgtttggca tgttttattt gtgacaaaaa gcttaaaaaca aatttgact			1348
			1387
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<211> 357			
<212> PRT			
<213> Mouse			
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Met Leu Pro Val Cys His Arg Phe Cys Asp His Leu Leu Leu Leu Leu			
1	5	10	15
Leu Leu Pro Ser Thr Thr Leu Ala Pro Ala Pro Ala Ser Met Gly Pro			
20	25	30	
Ala Ala Ala Leu Leu Gln Val Leu Gly Leu Pro Glu Ala Pro Arg Ser			
35	40	45	
Val Pro Thr His Arg Pro Val Pro Pro Val Met Trp Arg Leu Phe Arg			
50	55	60	
Arg Arg Asp Pro Gln Glu Ala Arg Val Gly Arg Pro Leu Arg Pro Cys			
65	70	75	80
His Val Glu Glu Leu Gly Val Ala Gly Asn Ile Val Arg His Ile Pro			
85	90	95	
Asp Ser Gly Leu Ser Ser Arg Pro Ala Gln Pro Ala Arg Thr Ser Gly			
100	105	110	
Leu Cys Pro Glu Trp Thr Val Val Phe Asp Leu Ser Asn Val Glu Pro			
115	120	125	
Thr Glu Arg Pro Thr Arg Ala Arg Leu Glu Leu Arg Leu Glu Ala Glu			

130	135	140													
Cys	Glu	Asp	Thr	Gly	Gly	Trp	Glu	Leu	Ser	Val	Ala	Leu	Trp	Ala	Asp
145				150				155					160		
Ala	Glu	His	Pro	Gly	Pro	Glu	Leu	Leu	Arg	Val	Pro	Ala	Pro	Pro	Gly
				165			170					175			
Val	Leu	Leu	Arg	Ala	Asp	Leu	Leu	Gly	Thr	Ala	Val	Ala	Ala	Asn	Ala
				180			185				190				
Ser	Val	Pro	Cys	Thr	Val	Arg	Leu	Ala	Leu	Ser	Leu	His	Pro	Gly	Ala
				195			200				205				
Thr	Ala	Ala	Cys	Gly	Arg	Leu	Ala	Glu	Ala	Ser	Leu	Leu	Leu	Val	Thr
				210			215				220				
Leu	Asp	Pro	Arg	Leu	Cys	Pro	Leu	Pro	Arg	Leu	Arg	Arg	His	Thr	Glu
				225			230				235			240	
Pro	Arg	Val	Glu	Val	Gly	Pro	Val	Gly	Thr	Cys	Arg	Thr	Arg	Arg	Leu
				245			250				255				
His	Val	Ser	Phe	Arg	Glu	Val	Gly	Trp	His	Arg	Trp	Val	Ile	Ala	Pro
				260			265				270				
Arg	Gly	Phe	Leu	Ala	Asn	Phe	Cys	Gln	Gly	Thr	Cys	Ala	Leu	Pro	Glu
				275			280				285				
Thr	Leu	Arg	Gly	Pro	Gly	Gly	Pro	Pro	Ala	Leu	Asn	His	Ala	Val	Leu
				290			295				300				
Arg	Ala	Leu	Met	His	Ala	Ala	Ala	Pro	Thr	Pro	Gly	Ala	Gly	Ser	Pro
				305			310				315			320	
Cys	Cys	Val	Pro	Glu	Arg	Leu	Ser	Pro	Ile	Ser	Val	Leu	Phe	Phe	Asp
				325			330				335				
Asn	Ser	Asp	Asn	Val	Val	Leu	Arg	His	Tyr	Glu	Asp	Met	Val	Val	Asp
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Glu	Cys	Gly	Cys	Arg											
				355											

<210> 3

<211> 27

<212> DNA

<213> Mouse

<400> 3

gcagccacac tcctccacca ccatgtt

27

<210> 4

<211> 9

<212> PRT

<213> Mouse

<400> 4

Asn Met Val Val Glu Glu Cys Gly Cys

1

5

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<110> Mark Marchionni
Michael Jarpe
Ted Ebendal

<120> METHODS FOR TREATING NEUROLOGICAL
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<130> 47506 (71095)

<140> 09/756,481
<141> 2001-01-08

<150> PCT/US99/15106
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<150> 60/091,791
<151> 1998-07-06

<160> 2

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 1387
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<222> (218)...(1288)

<400> 1

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ccaggacctc	aaagcacccc	cgacctaagg	tcaccagccc	actggcccca	gacgcagtgg	180
gctccgctga	ctcttttggga	cacctcctgg	gaggaaaa	atg ctc cct	gtc tgc cat	235
				Met	Leu Pro Val Cys His	
				1	5	

cgt	ttt	tgc	gac	cac	ctc	ctc	ctg	ctt	ctg	ccc	tcg	acg	acc	283	
Arg	Phe	Cys	Asp	His	Leu	Pro	Ser	Thr	Thr						
	10				15					20					

ctg	gcc	ccc	gct	cca	gca	tcc	atg	ggc	ccc	gct	gcc	gcc	ctg	ctc	cag	331
Leu	Ala	Pro	Ala	Pro	Ala	Ser	Met	Gly	Pro	Ala	Ala	Ala	Leu	Leu	Gln	
	25			30						35						

gtt	ctt	ggg	ctt	ccc	gaa	gct	ccc	cg	agc	gtc	ccc	aca	cac	cga	cct	379
Val	Leu	Gly	Leu	Pro	Glu	Ala	Pro	Arg	Ser	Val	Pro	Thr	His	Arg	Pro	
	40			45						50						

gtg cct ctc gtc atg tgg cgc cta ttc cgt cgc cgt gac ccc cag gag		427
Val Pro Pro Val Met Trp Arg Leu Phe Arg Arg Arg Asp Pro Gln Glu		
55 60 65 70		
gcc aga gtg gga cgc cct ctg cgg cca tgc cac gtg gag gaa cta ggg		475
Ala Arg Val Gly Arg Pro Leu Arg Pro Cys His Val Glu Glu Leu Gly		
75 80 85		
gtc gcc gga aac att gtg cgc cac atc ccc gac agc ggt ctg tcc tcc		523
Val Ala Gly Asn Ile Val Arg His Ile Pro Asp Ser Gly Leu Ser Ser		
90 95 100		
agg ccc gca caa ccc gcc agg acc tcg ggg ctg tgc ccc gag tgg aca		571
Arg Pro Ala Gln Pro Ala Arg Thr Ser Gly Leu Cys Pro Glu Trp Thr		
105 110 115		
gtc gtc ttt gac ctg tcg aat gtg gag ccc aca gag cgc cca aca cgc		619
Val Val Phe Asp Leu Ser Asn Val Glu Pro Thr Glu Arg Pro Thr Arg		
120 125 130		
gcg cgc tta gag ttg cgg ctg gag gct gag tgt gaa gat aca gga ggg		667
Ala Arg Leu Glu Leu Arg Leu Glu Ala Glu Cys Glu Asp Thr Gly Gly		
135 140 145 150		
tgg gag cta agc gtg gca ctg tgg gcc gac gca gag cat cca ggg cct		715
Trp Glu Leu Ser Val Ala Leu Trp Ala Asp Ala Glu His Pro Gly Pro		
155 160 165		
gag ctg ctg cgc gtg ccg gcg cca cca ggg gtg ctc ctg cgc gca gac		763
Glu Leu Leu Arg Val Pro Ala Pro Pro Gly Val Leu Leu Arg Ala Asp		
170 175 180		
cta ctg ggg act gca gta gcc gcc aac gca tca gtg ccc tgt act gtg		811
Leu Leu Gly Thr Ala Val Ala Ala Asn Ala Ser Val Pro Cys Thr Val		
185 190 195		
cgc ctg cgc ctg tca ctg cac cct ggg gcc act gca gcc tgt ggg cgc		859
Arg Leu Ala Leu Ser Leu His Pro Gly Ala Thr Ala Ala Cys Gly Arg		
200 205 210		
ctg gct gag gcc tcc ctg ctg gtg acg ctg gac cca cgc ctg tgt		907
Leu Ala Glu Ala Ser Leu Leu Leu Val Thr Leu Asp Pro Arg Leu Cys		
215 220 225 230		
ccc ttg ccg cga ttg cgg cgc cac acg gag ccc agg gta gaa gtt ggt		955
Pro Leu Pro Arg Leu Arg Arg His Thr Glu Pro Arg Val Glu Val Gly		
235 240 245		
cca gtg ggc act tgt cgt acc cga cgg ttg cat gtg agc ttc cgt gag		1003
Pro Val Gly Thr Cys Arg Thr Arg Arg Leu His Val Ser Phe Arg Glu		
250 255 260		

gtg ggc tgg cac cgt tgg gtg atc gcg ccg cgt ggc ttc cta gcc aac Val Gly Trp His Arg Trp Val Ile Ala Pro Arg Gly Phe Leu Ala Asn 265 270 275	1051
ttc tgc cag ggc acg tgc gca cta ccc gaa acg ctg agg gga ccc ggc Phe Cys Gln Gly Thr Cys Ala Leu Pro Glu Thr Leu Arg Gly Pro Gly 280 285 290	1099
ggg ccg cct gca ctc aac cac gct gtg ctg cgc gcg ctc atg cac gca Gly Pro Pro Ala Leu Asn His Ala Val Leu Arg Ala Leu Met His Ala 295 300 305 310	1147
gct gct ccc acc ccg ggt gca ggc tcg ccc tgc tgc gtg cca gag cgt Ala Ala Pro Thr Pro Gly Ala Gly Ser Pro Cys Cys Val Pro Glu Arg 315 320 325	1195
cta tca ccc atc tcc gtg ctc ttc gac aat agt gac aac gtg gtc Leu Ser Pro Ile Ser Val Leu Phe Phe Asp Asn Ser Asp Asn Val Val 330 335 340	1243
ctg cga cac tac gaa gac atg gtg gtg gat gag tgt ggc tgc cgt Leu Arg His Tyr Glu Asp Met Val Val Asp Glu Cys Gly Cys Arg 345 350 355	1288
tgaccacccg ggacaccctt tcagggaccg ccccacgcaa aagcaggac tgggtttca tgttttattt gtgacaaaaa gcttaaaaaca aatttgact	1348 1387
<210> 2	
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<212> PRT	
<213> Artificial Sequence	
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Met Leu Pro Val Cys His Arg Phe Cys Asp His Leu Leu Leu Leu 1 5 10 15	
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Ala Ala Ala Leu Leu Gln Val Leu Gly Leu Pro Glu Ala Pro Arg Ser 35 40 45	
Val Pro Thr His Arg Pro Val Pro Pro Val Met Trp Arg Leu Phe Arg 50 55 60	
Arg Arg Asp Pro Gln Glu Ala Arg Val Gly Arg Pro Leu Arg Pro Cys 65 70 75 80	
His Val Glu Glu Leu Gly Val Ala Gly Asn Ile Val Arg His Ile Pro 85 90 95	
Asp Ser Gly Leu Ser Ser Arg Pro Ala Gln Pro Ala Arg Thr Ser Gly 100 105 110	
Leu Cys Pro Glu Trp Thr Val Val Phe Asp Leu Ser Asn Val Glu Pro 115 120 125	
Thr Glu Arg Pro Thr Arg Ala Arg Leu Glu Leu Arg Leu Glu Ala Glu 130 135 140	

Cys Glu Asp Thr Gly Gly Trp Glu Leu Ser Val Ala Leu Trp Ala Asp
145 150 155 160
Ala Glu His Pro Gly Pro Glu Leu Leu Arg Val Pro Ala Pro Pro Gly
165 170 175
Val Leu Leu Arg Ala Asp Leu Leu Gly Thr Ala Val Ala Ala Asn Ala
180 185 190
Ser Val Pro Cys Thr Val Arg Leu Ala Leu Ser Leu His Pro Gly Ala
195 200 205
Thr Ala Ala Cys Gly Arg Leu Ala Glu Ala Ser Leu Leu Leu Val Thr
210 215 220
Leu Asp Pro Arg Leu Cys Pro Leu Pro Arg Leu Arg Arg His Thr Glu
225 230 235 240
Pro Arg Val Glu Val Gly Pro Val Gly Thr Cys Arg Thr Arg Arg Leu
245 250 255
His Val Ser Phe Arg Glu Val Gly Trp His Arg Trp Val Ile Ala Pro
260 265 270
Arg Gly Phe Leu Ala Asn Phe Cys Gln Gly Thr Cys Ala Leu Pro Glu
275 280 285
Thr Leu Arg Gly Pro Gly Gly Pro Pro Ala Leu Asn His Ala Val Leu
290 295 300
Arg Ala Leu Met His Ala Ala Ala Pro Thr Pro Gly Ala Gly Ser Pro
305 310 315 320
Cys Cys Val Pro Glu Arg Leu Ser Pro Ile Ser Val Leu Phe Phe Asp
325 330 335
Asn Ser Asp Asn Val Val Leu Arg His Tyr Glu Asp Met Val Val Asp
340 345 350
Glu Cys Gly Cys Arg
355